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Combat Crew

Strategic Air Command

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U.S. DEPOSITORY

DECEMBER 1984
★★★★

BOMB COMP 84
PAGE 4

Combat Crew

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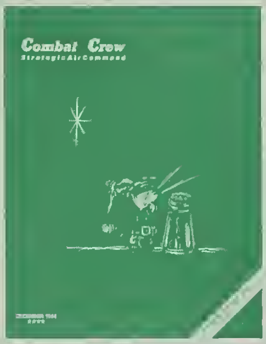

ON OUR COVER

Little Jing and the Spirit of Christmas are featured on our cover and in a special Christmas story on page 16 — our way of saying HAPPY HOLIDAYS!

SACRP 127-1 VOL. XXXIV NO. 12 DECEMBER 1984

COMBAT CREW is an internal publication of the Strategic Air Command with the primary purpose of promoting safety. The contents of this magazine are informative and not to be considered as directive in nature. Facts, testimony and conclusions of all mishaps printed herein may not be construed as incrimination under Article 31 of the Uniform Code of Military Justice. All names, dates and places used in conjunction with mishap stories are fictitious. Written permission must be obtained from Headquarters, Strategic Air Command before any material may be reprinted by other than U.S. Air Force organizations. Use of funds for printing this publication has been approved by Hq. USAF. Distribution FX, controlled by IGFE SAC units submit distribution requests through local PDO. Reader to copy ratio 10:1. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C 20402

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Several years ago, I read a very inspiring article written by General J. C. Meyer, former Commander in Chief, Strategic Air Command. A major point that General Meyer made was that we need to **"know our stuff"** when it comes to being prepared to defend our country. His thoughts were direct and to the point. To be fully prepared to do our job in combat, we must know every possible aspect of what our task entails. This goes far beyond just knowing "the book." As combat crew members, you must know and understand every operational aspect of your weapon system. But it doesn't stop there. You must know the mission, the rules of engagement, your enemy, and his capabilities. And very importantly, you must know your own capabilities and those of your fellow crew members. A tall order? You bet — but one that must be filled, because in our business — the defense of the free world — there is no prize for second place.

How do you go about preparing yourself for this momentous task of "knowing your stuff"? At the outset you must develop the attitude of a dedicated professional. You must understand that what we do is much more than just a job — it is a proud profession that has room only for those willing to sacrifice their very lives, if called upon to do so. With this attitude as your personal foundation, you set your goal — to be the very best you can be in your present and every succeeding assignment.

Those of you just beginning your combat crew training have a leg up; by starting with the right mental approach, you can maximize the effectiveness of your training. Those of you who have completed initial training can use our ISD program as a beginning, but it should not be totally relied upon for all the answers. Each crew member must make every minute of training count. You have to know more than just the basic workings of the weapon system; you must strive to understand what makes each component operate, and its interrelationship with other components within the system. When you have a firm grasp of integrated system operations, you are better prepared to respond to time-critical decisions.

In flight training, you have to realize that every moment you are airborne is an invaluable learning opportunity that must not be wasted. This is equally true when you fly your unit training sorties. I want to make one point very clear. I have no intention of implying

KNOW YOUR STUFF

that flying should not be enjoyed — it should. But that enjoyment must be placed in its proper perspective; your primary objective is to learn to fly and to fight.

In missile training, each step of your training is directed toward the EWO mission. From initial qualification training to operational alert duty, your knowledge of the entire weapon system is critical. With this in mind, every training opportunity — be it on alert, in the trainer, or in the classroom — must be used to expand your ability and your crew's ability to deal with any eventuality.

When you report to your combat unit, your work is just beginning. You must not only perfect your skills, but learn every detail of your unit's mission — I can assure you, the SAC mission is a big one. The complexities of modern warfare have placed added emphasis on flexibility of response, multiple weapons delivery, and complex mission profiles. As a combat crew member you are expected to have much more than a mere working knowledge of your tasks. You must be prepared for every contingency.

The task is enormous, the stakes are high, and it takes the very dedicated to attain the high standards required of our profession. To do less, or expect less of today's combat crew member invites disaster. While we expect each of you to train to your maximum potential, we cannot accept the loss of a single crew member, under any peacetime circumstance. The needless loss of life takes an incalculable toll on the very fiber of our command. The personal tragedy for each family member, its impact on the morale of everyone within the unit, and the degradation of our combat readiness are unacceptable, and must be in the forefront of our decision-making process.

As we all know, the cost of modern combat weapon systems is enormous. Our command will be receiving the B-1B and Peacekeeper in the near future and our current aircraft and missles are irreplaceable. These resources are limited and expensive. Senseless and avoidable accidents must be eliminated as far as humanly possible. Every forefeiture of life or destruction of critical weapon resources weakens our ability to defend the nation and insure the peace. And if we are weakened, we invite defeat. And defeat is an unacceptable alternative.

Are you prepared? Do you "know your stuff"? If you cannot answer those questions in the positive, now is the time to turn yourself around. Your unit is filled with professional instructors to assist you, and we have the best when it comes to training programs. The key to success is your personal commitment to the attainable goal of being fully prepared — **"knowing your stuff"** — so that you will be prepared to fight and win.

★★★

Lt Gen James E. Light, Jr.
Commander, Fifteenth Air Force

Plattsburgh Takes Home The Fairchild

The 380th BMW from Plattsburgh AFB captured the Fairchild and Saunders Trophies along with the Best FB-111 Crew Award.

Editor

The 380 BMW has won the 1984 SAC Bombing and Navigation Competition. Their victory was announced by Maj Gen Robert D. Beckel, SAC Deputy Chief of Staff, Operations, on 31 October 1984, at the Bomb/Nav Symposium at Barksdale AFB.

The 380th was awarded its fifth Fairchild Trophy in the last nine years of competition. No other unit has won the competition five times. Only one unit, the 380th's sister FB-111A wing and last year's winner, the 509 BMW from Pease, has won four times. Since 1974 only one non FB-111A unit has won the Fairchild, that occurred in 1980 when the 320 BMW from Mather AFB, CA, was victorious.

The Fairchild Trophy is awarded to the SAC wing with the best combined bombing and navigation team score for both bombers and tankers. It is named in honor of Gen Muir S. Fairchild, WWI bomber pilot and Vice Chief of Staff of the Air Force.

The 380th Bomb Wing carried home other spoils of competition in addition to the coveted Fairchild. The wing from upstate New York also won the **Saunders Trophy** for the tanker unit attaining the most points in all competition phases excluding fuel transfer, and also took top honors in FB-111 crew competition, winning the top two places.

Plattsburgh crews achieved the highest competition effectiveness(ce) of **.9137** to win the Fairchild. A close runner-up for the Fairchild was the 416 BMW from Griffiss, with a CE of **.8983.** The 5 BMW from Minot finished third by obtaining a CE of **.8551.** Interestingly, four units obtained competition effectiveness scores that bettered last year's winning CE of **.8154.**

The annual competition has four objectives: demonstrate strategic bomber and tanker capabilities; promote international relations in a friendly competitive environment; test new equipment, procedures, tactics and concepts; and enhance **esprit de corps** by recognizing crew and unit professionalism.

Crews participated from 15 SAC bombardment wings, 15 air refueling units including Air National Guard and Air Force Reserve. Non SAC bomber units representing TAC, RAAF, RAF and USAFE also competed. These units flew F-111D's, F-111C's, Tornado's and F-111F's, respectively. The RAF participated for the first time since 1979 with their new fighter-bomber, the Tornado. A swing-wing bomber, the Tornado resembles the F/FB-111 in mission and performance. For the first time in the history of the competition USAFE was represented. Crews from the 48th Tactical Fighter Wing from RAF Lakenheath, UK, flew F-111F's.

Another first in this year's competition was the addition of inert weapons releases to the scoring equation. Phase one of Bomb Comp 84 included the release of practice bombs in the

Emotions ran high as the winner of the Fairchild Trophy, 380 BMW, was announced.

Gen Bennie L. Davis, CINCSAC, unveils a plaque commemorating the renaming of the Barksdale AFB Auditorium to Hoban Hall in honor of Lt Gen Richard M. Hoban (ret), left

Griffiss 416 BMW was the proud recipient of the Ryan, Mathis, and Dougherty Trophies as well as the Best B-52 Crew Award.

The McDonnell-Douglas Trophy and the Best KC-10 Crew Award went to the 2d BMW from Barksdale.

Royal Air Force crews from RAF Marham garnered the LeMay and Meyer Trophies and the Best RAF Tornado Crew Award.

Beale's 9th SRW captured the Navigation Trophy

Nellis Bombing Range. The remainder of the scoring was done electronically.

Runnerup Griffiss AFB can be especially proud, taking top honors in four categories. The 416 BMW flying OAS converted B-52's won the **Mathis Trophy** for the best bombing unit, the **Ryan Trophy** for the best B-52 unit in both high and low level bombing and the **Gen Russell E. Dougherty SRAM Trophy** presented to the B-52 or FB-111 unit achieving the best overall SRAM results. Also, Griffiss crews S-34 and S-01 finished first and second, respectively, for the Best B-52 Crew Award.

Eighth Air Force won the **Doolittle Trophy** for best overall combined scores in low level bombing and SRAM accuracy and for the best KC-10 Tanker Unit, the **McDonnell Douglas Trophy.**

The **John C. Meyer Memorial Trophy** honors the Commander in Chief of SAC from May 1972 to August 1974. It is given to the F/FB-111 or Tornado unit achieving the highest damage expectancy rating. The 1984 winner was RAF 2 from the 617 Squadron, RAF Marham. Finishing second was the 27 FTW from Cannon AFB. RAF 2 also won the **Curtis E. LeMay Bombing Trophy** awarded to the bomber crew compiling the most points in both competition missions in high and low level bombing. RAF 1, also from Marham, finished a close second only four points behind their mates.

The 379 BMW from Wurtsmith AFB won the **William J. Crumm Linebacker Memorial Trophy.** This trophy is presented to the B-52 unit that compiles the most points in high altitude bombing. The runnerup was the 7 BMW from Carswell AFB.

The **James F. Bartsch ECM Trophy** went home with the 320 BMW, Mather. This trophy is presented to the B-52 unit that achieves the best overall electronic warfare results. The 42 BMW of Loring AFB finished second.

The "Beale Bandits" flying the KC-135Q from the 9 SRW compiled the most points on their competition mis-

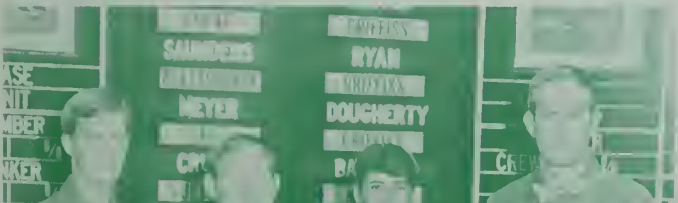
The Bartsch ECM Trophy went to the 320 BMW from Mather AFB.

Wurtsmith's 379 BMW pose with the coveted Crumm Linebacker Memorial Trophy.

Best B-52 Crew, 416 BMW, Griffiss AFB.

Best FB-111 Crew, 380 BMW, Plattsburgh AFB.

Best KC-135 Crew, 5 BMW, Minot AFB.



Best KC-10 Crew, 32 AREFS, Barksdale AFB.

sions in celestial navigation and were presented the **Navigation Trophy.** Plattsburgh tankers again contributed to the Fairchild by finishing second.

A special ceremony marked the beginning of this year's score posting. Gen Bennie L. Davis, CINCSAC, dedicated the competition headquarters as **Hoban Hall** in honor of Lt Gen Richard M. Hoban (USAF-RET). Lt Gen Hoban served as commander of Second and Eighth Air Forces from 3 October 1973 to 27 October 1976 and was the driving force behind bringing SAC's annual Bombing and Navigation Competition to Barksdale.

The Best Crew Awards were won by the following crews and units:

Best B-52. First: Crew S-35, P Capt Robert T. Miller, CP 1Lt Daniel K. Kenny, RN Capt Jeffery E. Thieret, N 1Lt David W. Schneider, EW 1Lt Nelson W. English, G SrA Charles N. Follen, 416th Bomb Wing, Griffiss AFB.

Second: Crew S-02, commanded by Capt David R. Evans, 416th Bomb Wing, Griffiss AFB.

Best FB-111. First: Crew E-55, P Maj Paul E. Murr, RN Capt Bradley L. Moffett, 380th Bomb Wing, Plattsburgh AFB.

Second: Crew S-02, P Maj Donald F. Lee, RN Capt Karl B. Young, 380th Bomb Wing, Plattsburgh AFB.

Best TAC F-111. First: Crew R-83, P Capt Jeffrey J. Sogard, WSO Capt Richard J. Bartnell, 27th Tactical Fighter Wing, Cannon AFB.

Best USAFE F-111. First: Crew R-276, P Capt Charles McGee, WSO Capt Mark Gerth, 48th Tactical Fighter Wing, RAF Lakenheath, UK.

Best RAAF F-111. First: Crew 01, RAAF Amberly.

Best Tornado. First: Crew 03, P Sq Ldr Peter Dunlop, N Flt Lt Richard Middleton, RAF Marham, UK

Best KC-10. First: Crew E-232, P Capt Ryan S. Dow, CP Capt Derrick B. Spott, FE TSgt Lee S. Swanson, BO SSgt Robert A. Downs, 32 AREFS, Barksdale AFB.

Second: Crew E-201, commanded by Capt Aramas J. Jaskey Jr., 9 AREFS, March AFB.

Best KC-135. First: Crew E-118, P Capt John E. Butcher, CP 1Lt Christopher L. Chapman, N 1Lt Joseph T. Miller, BO SrA James C. Youngblood, 5th Bomb Wing, Minot AFB.

Second: Crew E-162, commanded by Capt John M. Green, 380th Bomb Wing, Plattsburgh AFB.

B-1B ROLLOUT

Maj Harry Mandros
HQ SAC/XPHB

"And here it is, ladies and gentlemen, the most advanced strategic airplane in the world — the Air Force's first production B-1B. Let's roll it out."

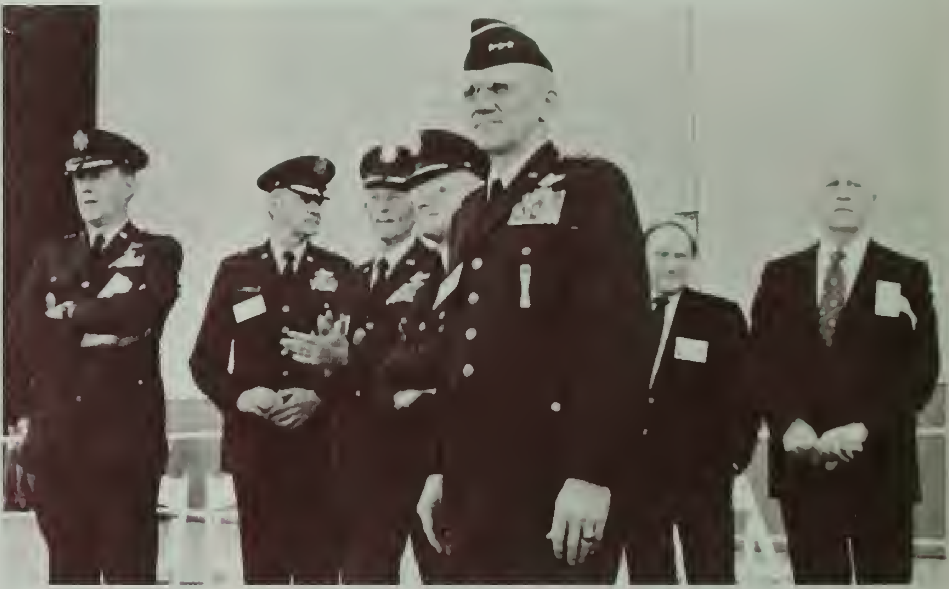
As Sam Iacobellis, executive vice president of North American Aircraft Operations, continued to introduce America's newest arm of the Triad, the enormous hangar doors opened.

The large crowd gathered at Palmdale, CA, on September 4, 1984, saw the sleek figure of the B-1B slowly emerge into the sunlight. A SAC shield over the numeral one was emblazoned below the cockpit.

Smartly outfitted tug drivers and "wing walkers" paraded the aircraft as hundreds of spectators crowded around to get a closer look. Remarks by the audience complimenting the B-1B appearance could be overheard, echoing comments Iacobellis made earlier.

"Painted a combination of dark greens and grays," he said, "the B-1B is the size of a commercial Boeing 707, but the highly efficient blended wing-body makes the B-1B look more like a fighter than a bomber. It is only two-thirds the size of the B-52, yet with a gross weight of 477,000 pounds and a tremendous fuel carrying capacity, B-1Bs based in the United States can complete overseas missions and return to this country without refueling.

American engineers, assembly technicians, and corporate executives had just presented the United States Air Force an aircraft that represents the highest technology of our aerospace industry. The B-1B development and production effort comprises four associate contractors (Rockwell International, Boeing Military Airplane Company, AIL Division of Eaton, and General Electric), and 5200 sub-contractors, components for the aircraft are produced in 44 states, hence the popular denotion — America's Bomber."



Some of the dignitaries present from left to right: Gen Skantze, Commander AFSC; Maj Gen Thurman, B-1B SPOC, ASD; Gen Davis, CINCSAC; Gen Mullins, USAF (ret), then Commander AFLC; Lt Gen McMullen, Commander ASD; Richard DeLaver, Under Secretary of Defense for Research and Engineering; Buz Hello, President of North American Aircraft Operations/Rockwell International.

My assignment at SAC Headquarters affords the opportunity to communicate with aerospace industry workers in the "trenches", and what I've seen and heard impresses me. Pride in their product is evident, but more importantly, the question, "what will be best for the SAC aircrew?" is frequently asked. This contractor concern associated with providing the aircrew with the best possible equipment will undoubtedly result in an illustrious record of service in the years to come.

B-1B rollout served as testimony to the success of a massive industrial effort by this country to produce the best, but all the technology cannot give the B-1B what it requires to get the job done — a mind! Soon SAC's most important resources will begin their preflight early one morning and then the B-1B will have it all. Fly safe, gentlemen.

VECTORS TO A B-52 FULL STOP

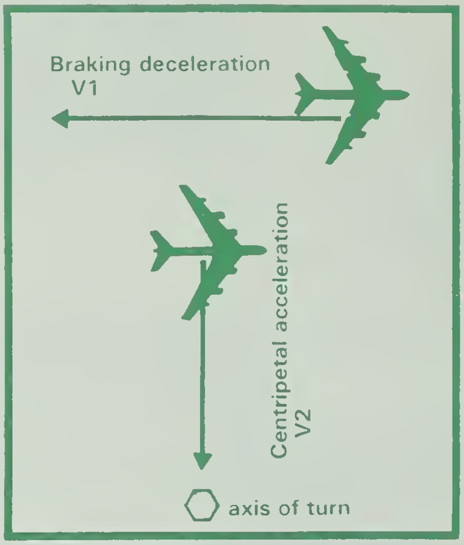
Major John R. Gannon
HQ SAC/XOE

“They approached the left side of the runway with brakes applied and full right rudder (confirmed by the copilot).”

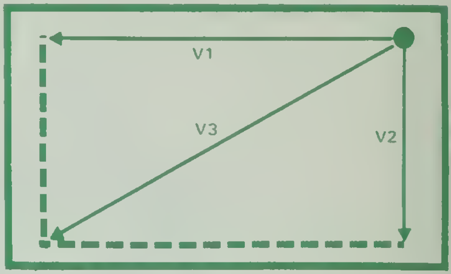
This actual quote from a high accident potential (HAP) report involves a B-52 going off the side of a slippery runway at one of our northern bases. Since the report emphasizes brake and rudder position being confirmed by the copilot, it would indicate that the authors of the message felt the aircrew had taken the proper action to keep the airplane on the runway. Did they? Probably not.

To arrive at the proper procedure for braking and steering on a less than dry runway we need to review vectors — no, not inflight vectors; vectors as a quantity specified by a magnitude and direction relative to the B-52 front main gear tires. I will ignore the gruesome details of the equations and just impart the salient points to keep the message "reader friendly."

Two of the vectors we are concerned with are braking deceleration and centripetal acceleration (turning acceleration directed toward the axis of the turn) visually depicted below.

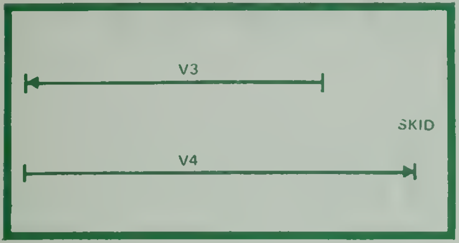


The cumulative value of V1 and V2 is depicted as a third vector (V3) in the diagram below:



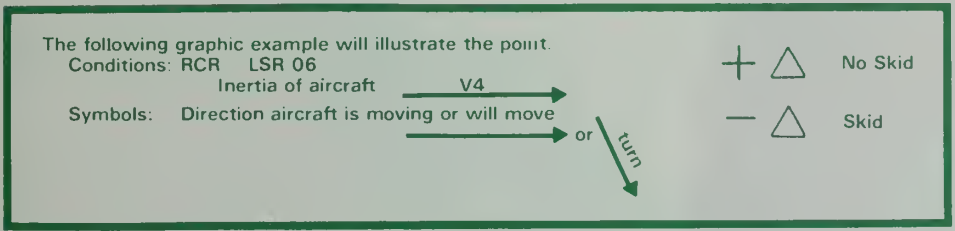
V3 is the total coefficient of friction (traction) of the front main gear tires on the pavement. Our nemesis in this equation is the inertia (a fourth vector) of the aircraft. Part of the law of inertia says that once a body is placed in motion, it will stay in motion on a straight line unless disturbed by an external force. In our case, the primary external force* that can disturb the force of in-

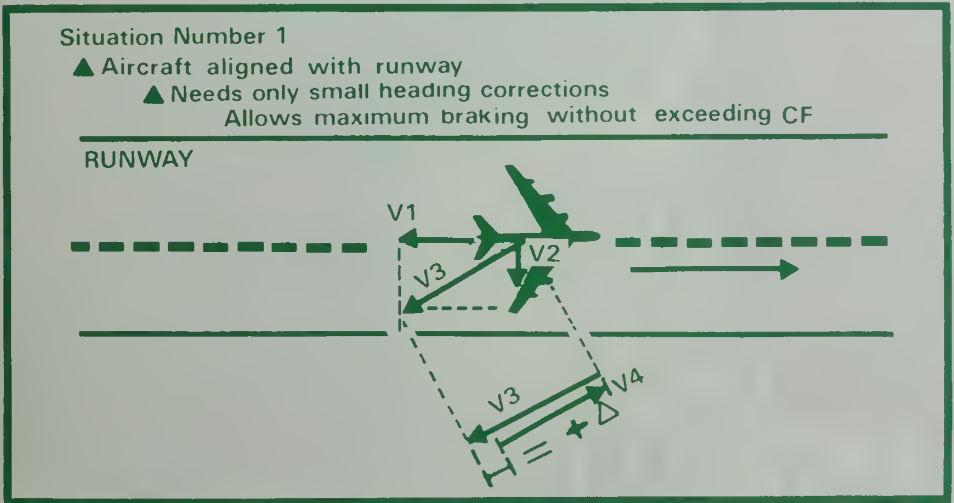
ertia is the coefficient of friction. If the inertia vector (V4) exceeds V3 then a skid develops.

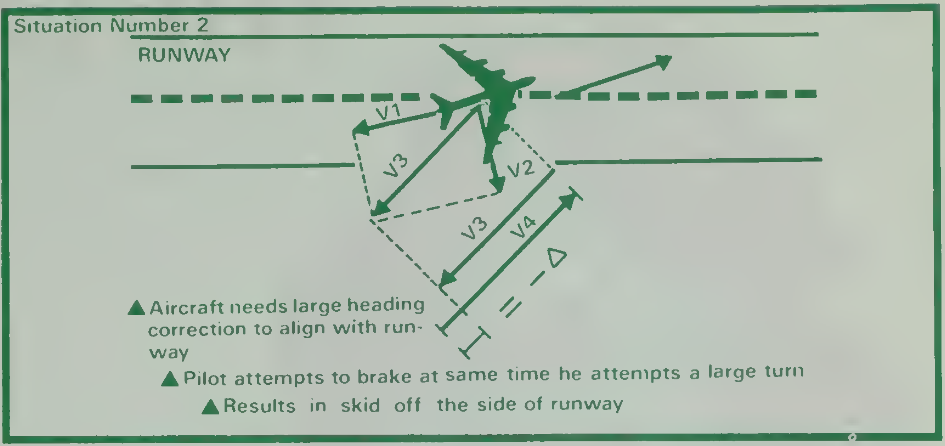


*Depending on ground speed, crosswind and actual RCR; rudder, drag chute and differential thrust can all play in the equation, however, braking and steering control must be considered the primary controlling inputs when trying to bring a B-52 to a safe stop on the runway.

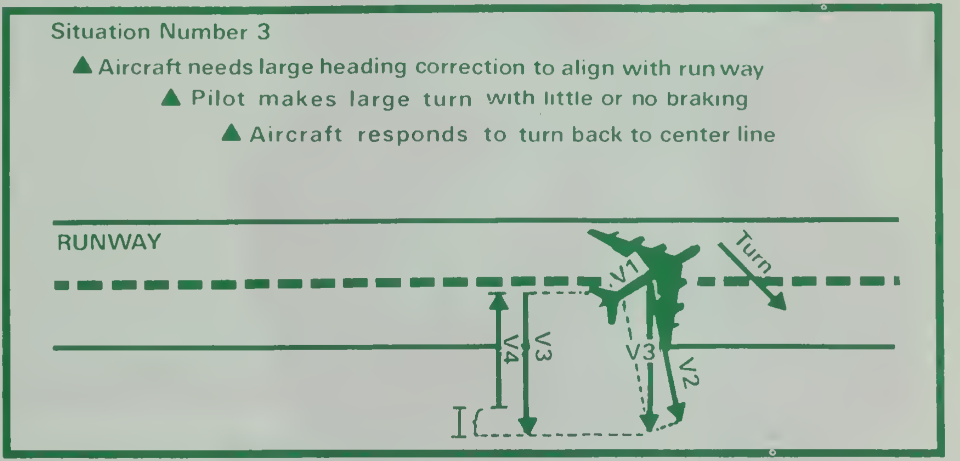
What's the practical application of all this? The front main gear tires of a B-52 are used for both braking and turning. In the case of a dry runway, this presents no problem since the coefficient of friction between the placement and tires is high, making braking and steering at the same time no problem. When it is slippery, the traction available must be split between braking (V1) and turning (V2) depending upon the more critical need.


The following graphic example will illustrate the point.
Conditions: RCR LSR 06
Inertia of aircraft V4
Symbols: Direction aircraft is moving or will move


Situation Number 1
▲ Aircraft aligned with runway
▲ Needs only small heading corrections
Allows maximum braking without exceeding CF


Situation Number 2

▲ Aircraft needs large heading correction to align with runway
▲ Pilot attempts to brake at same time he attempts a large turn
▲ Results in skid off the side of runway


Situation Number 3
▲ Aircraft needs large heading correction to align with run way
▲ Pilot makes large turn with little or no braking
▲ Aircraft responds to turn back to center line

What's the bottom line of all this? If it's slippery and you're heading for the side of the runway with brakes on and the aircraft will not turn, get off the brakes until you are lined up with the runway heading **then** reapply the brakes. If this sounds like what you do in your car when it is slippery, you're right. The same principle applies.

And by the way, when you are in a position to use your brakes the following guidance from the Boeing Military Airplane Company Service News (Oct-Nov-Dec 1983 issue) will help you to achieve maximum braking.

"On wet, slush covered or icy runways, maximum braking action is attained by reducing brake pedal pressure to minimize antiskid cycling. The rate of antiskid cycling during a landing roll depends on how much brake pressure is being applied and the coefficient of friction between the tire

cont'd on page 24

THE CURE FOR I.G.ITIS

Capt Mark K. Cromer
321 SMW, Grand Forks AFB

In my experience as a missile crewmember and staff officer. I've observed a cyclic illness afflicting many military managers. This yearly phenomenon lurks over a missile wing and strikes those who, unfortunately, don't make the effort to protect themselves. Once it strikes, this disease has the power to convert unprepared managers into panicked victims, acting like the proverbial chicken who lost its head to a farmer's axe. What's this disease known as? Beri-beri? Yellow fever? The plague? No, this ailment is the well known nemesis of Air Force managers, "I.G.itis."

I.G.itis usually strikes quickly, affecting managers who haven't prepared for the ORI by keeping their unit self-inspection programs in order. Once learning that the I.G. has landed, these individuals rush around, looking for those illusive self-inspection checklists. After finding them, they discover that the checklists are incredibly out of date, making them virtually worthless. All this, with the inspectors knocking at the door.

Although this situation seems hopeless, there is a cure. I've found that successful military managers use their self-inspection programs as preventive health care to protect themselves against I.G.itis. In fact, AU-2: The Guidelines for Command, points out that a healthy self-inspection program is the key to the making of an outstanding unit, by identifying problems and resolving them before the inspectors arrive. Here are a few tips concerning self-inspection programs. When followed, these tips will help managers avoid I.G.itis.

1. **Flexibility:** The self-inspection program for your unit must keep up with the changes affecting your organization. In short, it should be dynamic, not static. The self-inspection should be run monthly by several individuals, and must truthfully assess unit strengths and weaknesses. Initiatives,

as well as discrepancies, should be documented on SAC Form 210.

2. **Outside Inputs:** Your self-inspection monitor should closely follow inspection reports from other units, thus ensuring that similar problems do not exist at your unit. Additionally, TIG Briefs and Command Interest Items contain a wealth of information, geared toward keeping your unit error-free. Of course, the monitor must make every effort possible to avoid repeat writeups. This is accomplished by getting the discrepancy solved correctly, the first time.

3. **Aggressive Followup:** Writeups, when identified, need to be closely monitored and closed out when completed. The last thing you want is to have a discrepancy "slip through the crack" during self-inspection, only to be discovered by a higher headquarters.

4. **Get a Lot of People Involved:** In this case, too many chefs do not spoil the stew. Different perspectives and attitudes help ensure a self-inspection program is air tight. Checklists can be broken down and distributed among several workers who will accomplish them on a periodic basis. In fact, this technique helps promote team spirit within the unit, with all members working toward a common goal.

5. **Don't Pencil Whip:** Writeups need to be honestly closed out, not "massaged." The only people you're fooling (and hurting) are yourself and the unit.

6. **Establish Monthly Suspenses:** A monthly suspense system helps your unit self-inspection monitor track discrepancies and eliminate them in a timely manner. Again, aggressive followup is essential to a solid program.

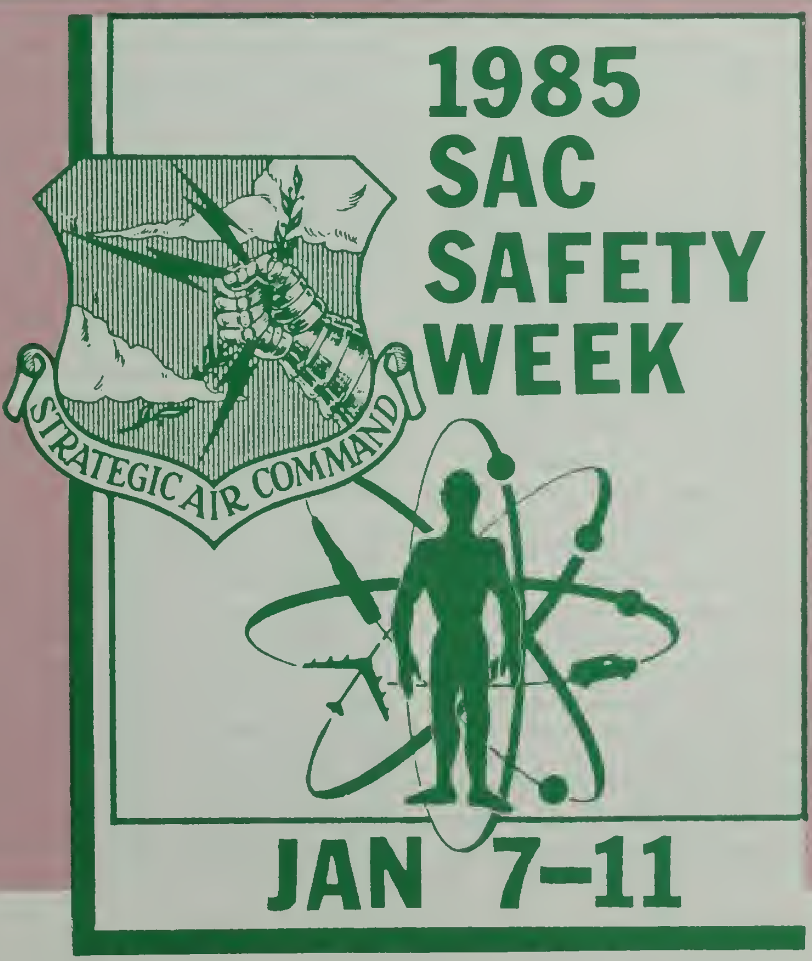
7. **Be Knowledgeable:** Not only should the self-inspection monitor be a weapon system expert, but also the unit's authority on self-inspection. Know the regulations, don't just read them. Every unit commander knows the worth of a good, knowledgeable self-inspection monitor.

8. **If in Doubt, Ask!** The worst time to ask questions is during an evaluation. Before the inspectors arrive, ask the experts to help out. For missile wings, your deputate and division self-inspection monitors possess a wealth of information. Use them!

9. **Keep Your Unit "Inspection Ready."** When you're prepared, you won't have to worry about those "ghosts in the closet" come inspection time. Get those checklists out — dust them off, if necessary, and run them frequently.

10. **Try It, It Works:** Simply stated, a good self-inspection program not only corrects problems, but, when effectively managed, is your unit's best foot forward. Additionally, a good program helps other areas within your unit prosper in the preparation for inspections. Besides, self-inspection gets the job done right; and isn't that the reason we're all here?

By using the methods outlined in this article, SAC managers can make a dinosaur out of the old I.G. bug. Thanks to ceaseless efforts in perfecting preventive health programs, our society has been able to reduce the incidence of many dreaded diseases. Similarly, we in the missile business can use a solid self-inspection program as a booster shot, helping eliminate the common affliction of **"I.G.itis."**



THOUGHTS FOR THE CFIC GRADUATE

CFIC, Castle AFB

Editor's Note: *This article was written several years ago before women entered the SAC crew force. The use of the male pronoun is intended to refer to all crewmembers regardless of gender.*

We at CFIC would like to give you our thoughts on the current instructor role in the Strategic Air Command. The concepts of what the SAC instructor is and what he accomplishes has changed drastically. You no longer are a crewmember with an additional duty who simply monitors, evaluates, and sometimes only babysits fully qualified personnel. You are now a highly responsible part of the squadron staff. Your primary duty is to instruct, but there are many other facets to your job. As a staff member you formulate policy involved in your specialty. Along with your new position, you acquire new and bigger responsibilities to your unit, to SAC, and to yourself.

We really don't know if you are aware of your value to the command, but believe us, SAC needs you and is depending on you. The changeover in SAC has been extensive. We no longer have many "old heads" around. You are the "old heads;" you are the expertise, the knowledge, and the skill of this command. You are the very best SAC has and you are damn good at what you are doing. SAC is honestly depending on you, whether you have 1000 or 5000 hours; you are the pride and hope of this command.

We need to identify the new problem areas and to do something about them, (those we do not or cannot see). By this, we mean submit a change, or two, or a hundred if you can. Because we have done something for years doesn't mean it is right. Don't let us be wrong forever. Help us to correct our errors and do away with our weak spots. You, the instructors, are the ones closest to the problems and must work with them daily, so logically you know best how to correct them. Your ideas, new ideas, can provide new directions for all of us to follow.

We have seen changes take place in the last few years which were certainly not considered possible in the past — a more realistic approach to bold print, engine out landings, a more realistic simulator program, and many others. We need more improvements like these and we hope they continue. They come from the minds of the experts and you are the experts. Very simply put, we need your help to make this command a better and safer place to live and work in. Your ideas not only improved our techniques but directly affect safety. Even minor changes which remove little irritants or provide a more expedient method can help this command. In the overall picture, we are talking about a many faceted job, that of being an instructor crewmember; one which even affects retention. If it is a better place in which to live and work, it will be a better place in which to make a career.

We would like to discuss your responsibilities in more detail, and to be more specific, those of your commander and of your students. In regard to your commander, if you could change places with him you would find that he sees you as a key part of his staff. You have your finger on the pulse of his squadron as far as training, proficiency and safety goes. You must provide a systematic, adequate and safe program to provide the necessary in-unit training. Remember, his most reliable information, as to the proficiency of his crewmembers, comes from you. Seek out the unit's weaknesses in the proficiency area and provide a program to fix them. Your commander simply does not have the time nor the opportunities to judge these weaknesses as quickly as you can. His only feel for the students' progress or potential is through you and your grade sheets. Be thorough, and by all means, be accurate, or a better phrase, be honest. If you award a grade of outstanding or sat-

"You are the very best SAC has and you are damn good at what you are doing."

isfactory, be sure that is what you mean, for he is using this information in order to make decisions on crew assignments, etc. He depends on your honest evaluation. He places a great deal of importance on what you say on these grade sheets so help him by telling it like it is. Your training program is of vital importance to SAC and your unit's future. Whatever you are doing now will directly control the operational and safety aspects of your unit in the future. One final responsibility to your commander is to keep the overall objective of your unit uppermost in your mind; its operational capability. You should not only be alert for areas of weakness which could affect this capability, but you are the man who should provide the plans to correct them. The successful completion of CEVG visits, ORIs, etc., are also your responsibilities. They will directly reflect how you are doing your job. The most important obligation and responsibility is to your student. He deserves the best you have to offer and should receive it. Learning takes place because of the instructor not in spite of him. The orders that were cut did not make an instructor out of you overnight. Here is where some self-help must come into being. You must strive to be the very best instructor you can. How long has it been since you looked at a book on aerodynamics? What are the basic principles of education? Do you know why learning takes place? How about public speaking? Learning can be enjoyable and the environment you create will definitely affect the results you achieve. Nothing creates better and faster learning than a pleasant atmosphere to work in. You, the instructor, control this. Remember we talked about self-improvement? A little review in the psychology of teaching might not hurt. The impressions you make will be lasting ones. No one forgets their instructors, good or bad. You might as well be remembered as a good one. You've worked hard, you deserve it.

NOW FOR SOME DO'S AND DON'TS

DO be a professional. You should be proud of what you are doing. You are a professional; be one or get out of the game. Make yourself available to your unit's personnel. By this, we mean you should let them know your time is theirs and you are willing to give it to them. Let them know you are interested in their problems and want to hear their ideas. You may be surprised to find out that they have better ideas than you or may see it from a different point of view. To some, the unit instructor may seem unapproachable simply because of his rank or position. Don't let this happen to you. It is your responsibility to do away with this image.

DO stress safety. We are operating very large and sophisticated machines and must continue to emphasize safety at all times. If you ignore it, so will your students. Remember, what you say and do is the gospel and you will be imitated. You haven't been exposed to embarrassment until your student is asked why he did something that flunked him on a check and he says, "Well, Sir, my IP does that all the time!" So don't deviate from prescribed procedures. Your actions will be copied and safety will be compromised.

DON'T bend to pressure or sign off anything for expediency that has not been accomplished. Be sure your students get the benefit of your experience in every maneuver. The one you sign off without accomplishing may be the one that causes a major accident. Pressure can be applied to make it seem reasonable to overlook part of a checkout program. Don't do it. Remember your responsibilities. Your commander is depending on you to turn out a finished, safe product. Don't give him less than that. Your attitude toward flying, safety procedures, and to the command or unit will be copied and repeated.

Remember, you are the image of experience and knowledge, so don't put down our command or your unit because you are a part of each and when you do that, you are compromising yourself and the rest of us. We guarantee that we don't care for it and neither will your student, because he is also a part of what you are putting down. If you don't like it, fix it.

We know as well as you that the instructor cannot solve all the motivation problems that we encounter. Some of the problems, such as TDY separations from the family, delays in upgrading and alert schedules, are not solvable by the instructor. However, with these problems already present, it makes it that much more important for the instructor to really work at motivating the student. How do we do it? Complain continuously about alert, unfair evaluators and airline pilot salaries; make sure the student knows that you are not interested in his progress and that you know nothing about his previous activity except that he is stupid; also make sure the student knows the aircraft is old and unsafe and that he will be a copilot for the rest of his career; ridicule frequently and make the student wonder how you can know so little and still be an instructor. How many times have you seen or heard this approach? If you ever do, put a stop to it. The student deserves better than that. Your student deserves the best to learn to fly and

cont'd on page 25

LITTLE JING'S CHRISTMAS

Lt Col Bob Peisher,
USAF (retired)

ONCE upon a time, way up in Santa Claus land there was an elf named Jing.

Now little Jing was not just an ordinary elf. He was very very small. In fact, he was about as high as a salt shaker. Most of the other elves were at least 12 inches tall, and some were even two feet tall. But little Jing was only 4 inches high. Little Jing was very unhappy, mostly because he was too small. He wanted to help make the toys, but the tables were too high, the hammers were too big and the paintbrushes were too heavy.

The other elves were so big that every once in a while one of them would step on him.

Every time Jing tried to do something to help Santa Claus, he ended up with a big tear in his eye, because he couldn't reach high enough or wasn't strong enough.

As Christmas drew near, the elves began to work very hard getting ready for Santa's annual Christmas flight that delivered toys to all the boys and girls around the world.

Santa knew Jing felt very unhappy because he couldn't help with the Christmas preparations.

On the day before Christmas he took Jing to the reindeer barn and told him he had a job for him.

Santa gave Jing a can of polish and a little polishing cloth. Pointing to the reindeer harness, he said, "Jing, this harness is the one I'm going to use next year for all the reindeer.

The harness I'm going to use this year is already polished. I want you to polish this one so it will be ready to use next year."

Jing was very, very happy. He was so happy all he could say was, "Jing, jing, jingle, jingle." He went to work polishing the harness, and Santa left the reindeer barn to get ready for his flight around the world.

As you know, the reindeer had to eat magic straw before they started the long trip around the world. This year, as bad luck would have it, the magic straw got mixed with the regular straw and so it lost some of its power. In all of the excitement of getting ready no one noticed the mistake.

In the meantime little Jing was polishing . . . He was sooooo happy to be doing something for Santa.

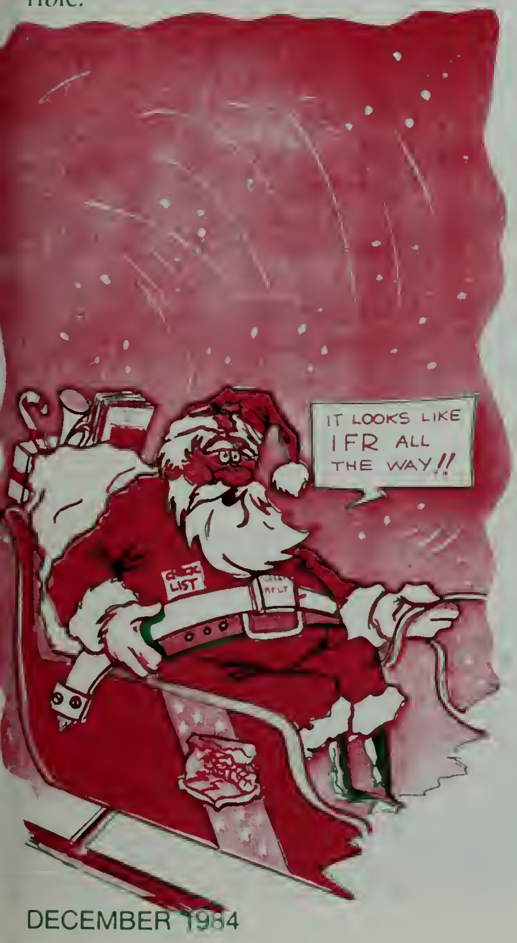
In fact he polished all night long and, when he got to the lead harness, Dasher's harness, he was so tired, he just laid down on top of the harness and went fast asleep. The harness was so big and he was so small that no one even noticed him.

It was Christmas Eve and out in the yard the sleigh was loaded with toys and the reindeer were in the harness ready to go.

Everything was set when suddenly something happened. The harness broke!!! Oh, this was terrible.

"Hurry, hurry and get the other harness," said Santa. In a matter of minutes the harness was changed and the reindeer took to the air wearing the harness Jing was on. No one even noticed he was still sleeping on Dasher's harness.

When Santa and his reindeer got on their way, they found it was the worst night that ever was. It was darker than ever before, and the wind was blowing harder than ever before. It was just terrible.


IT LOOKS LIKE IFR ALL THE WAY!!
LIST
BELT

As Santa and the reindeer flew around the world going from house to house something began to happen. The magic straw was beginning to lose its power. The reindeer were flying more and more slowly. Santa was starting to worry and the reindeer were feeling very badly, because they knew what was going to happen. If they didn't fly faster, Santa would not be able to deliver all of the toys to the boys and girls for Christmas.

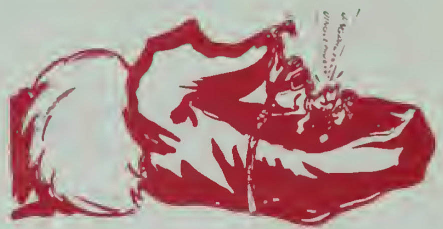
Just when things were looking blackest, what do you think happened? — Little Jing woke up! — The reindeer were flying very slowly through the wind and snow. Jing was very frightened; in fact, he was so frightened all he could say was, "Jingle, jing, jing, jingle, jingle, jing," and it sounded just like musical bells.

Dasher heard the little sound and it sounded so nice it made him feel good all over and he started flying faster.

Then Dancer heard little Jing singing; then Prancer, then Vixen. All the reindeer heard the little musical sound little Jing was making. It made them feel good and fly faster.

Santa told Jing to keep singing and singing, "Jingle, jingle, jingle, jingle." Through the night they flew — because of little Jing's song. Santa was able to deliver all the toys to the boys and girls for Christmas.

When Santa arrived back at the North Pole, little Jing was fast asleep in his mitten. Santa told all of the other elves how Jing had saved the Christmas by making the reindeer fly faster with his little song.



The next day, when Jing woke up, Santa said, "Come with me, little one: I have a very special job for you to do." He took Jing to a little workshop that was just his size, with little tables and little tools and little brushes. It was just big enough for Jing.

Do you know little Jing is still working today in his little shop. Yes, and what do you think he is making." — Jingle Bells!!!

And that is how the first jingle bells came to be. And that is why Santa's reindeers have rows and rows of jingle bells on their harness. So the next time you hear a jingle bell, remember the little elf named Jing, who made it.

Have a Happy and Safe Holiday

Robert J Peisher
LtCol USAF Ret., MS Psychology, President of Canisteo Chamber of Commerce and all-around good guy

MERCY FLIGHT — A Mission of Love

Capt Steve D. Doherty
7 BMW, Carswell AFB

On 22 June 1984, at 0624 local, aircraft 60-314 (call sign Lifeguard 314) started its takeoff roll on Runway 17. To the casual Fort Worth observer it was just another early morning KC-135 takeoff from Carswell. But to six crewmembers and 22 flight line support and command post personnel it would be a mission that they would not forget for a long time. Lifeguard 314 was on a mission of mercy.

As the pilot, Lt Col Ken Dale, leveled 314 at 4000 feet his copilot, Maj Ken Irvin, passed his ATC request to Departure Control, "Lifeguard 314 requests present position direct JFK International."

"Lifeguard 314 cleared as requested," came the reply.

The crew was rather surprised at the quickness with which their request was handled, but then this was not an ordinary operational mission. The call sign Lifeguard gave their aircraft the highest ARTCC traffic routing priority, with the exception of inflight emergencies. The navigator, Capt John Griffith, passed his initial heading to the pilot, and then began inserting the coordinates of JFK into his inertial navigation system. He would let the black box navigate this mission to save time.

After Lifeguard 314 leveled at FL 350, Lt Col Dale took time to reflect on the morning events. He had received a call at 0520 from the on duty officer in the command post, "Can you get a crew together ASAP for a mercy mission launch at 0630?" We're preparing an aircraft for launch."

"Yes, have the Strip Alert Crew do the preflight," Lt Col Dale replied, "we'll meet them at the aircraft." Thirty-five minutes later he and three other crewmembers he had contacted were at the aircraft starting engines. At the same time a security police vehicle with emergency response lights flashing entered the flight line, followed closely by a civilian sedan. Inside the sedan was a precious cargo, a container 28x12x12 inches; inside the container a human kidney for transplant. Time was very critical; the kidney had 15 hours remaining in which it could be transplanted.

As Lt Col Dale found out later, the events leading to his launch were as critical as the flight itself. The command post received a call at 0500 from the Southwest Organ Bank in Dallas. The organ recovery coordinator, Mike Baker, was requesting help in getting a human kidney for transplant to JFK International Airport. Once there the kidney would connect with one of two British Airways Concorde flights bound for either Kuwait or London, England, where recipients were being prepared for the delicate surgery. The Southwest Organ Bank had exhausted all means of commercial transportation to meet the British Airways flights and the 72 hour time limit on the kidney was rapidly running out.

"Inside the sedan was a precious cargo, a container 28x12x12 inches; inside the container a human kidney for transplant."

In the command post the controller's first call was to job control to see if there was an aircraft ready for an ASAP launch — there was. Next he called both the 8th Air Force and HQ SAC Command Posts requesting guidance and authorization for this unusual flight. Current directives referenced the transport of individuals but did not address organs for transplant; however, HQ SAC gave its blessing. At 0515 he had the wing commander's authorization and then placed his call to the 7th Air Refueling Squadron Commander, Lt Col Dale.

Mike Baker, the Southwest Organ Bank coordinator, was grateful when he was informed of the preparations for the approved flight. He was already enroute to Fort Worth when he received the call over his mobile telephone. He was equally thankful when Fort Worth policed merely waved him on as he passed them doing 80 mph — the controller had found time to notify the Fort Worth Police Department with a description and license number of his automobile. As he took the exit off Highway 183 to the Carswell main gate he was greeted by a 7th Security Police Squadron escort that delivered him to the waiting aircraft. "It's a miracle," he told the flight crew as he handed over the fragile package.

Once airborne, Lifeguard 314 was hampered by a strong headwind and finally landed at JFK International at 0930 EST. It was 30 minutes too late for British Airways flight to Kuwait, however, the connection to London would be made. Lt Col Dale and his comrades had accomplished their mission and they felt good about it. The ground support personnel back home could feel equally proud; their efforts helped launch 314. As for Mike Baker, it was just another successful day as an organ recovery coordinator.

The use of Air Force resources to provide lifesaving transportation must, of course, be accomplished in accordance with current DOD/USAF/SAC directives and regulations. The command post controllers had consulted DOD 4515.13-R, Chapter 11, Aeromedical Transportation, which outlines the criteria for determining transportation eligibility. Chapter 14, Special Actions and Procedures, provided additional guidance and authorized the wing commander to launch this mission. Additionally, SACR 55-12, Chapter 3-4m., Aeromedical Transportation, provided further guidance and authorization of SAC aircraft for transportation for lifesaving activity. Inadequacy or inability of commercial resources to provide the requested transportation supplied the prerequisite necessary to satisfy both regulations.

The use of the call sign Lifeguard plus the last three digits of the aircraft tail number were given to the command post by Fort Worth Center to expedite the mission. Normally the Lifeguard call sign is reserved for commercial air ambulance use only. Had there been more time this mission would have been filed as Airevac plus the last four digits of the aircraft tail number, or the 7BMW call sign plus two digits with Priority Airevac placed in the remarks of the DOD Form 175.

EPILOGUE: *That evening, in London, England, the kidney was successfully transplanted into a 35 year old British woman. The gift of love that she received will never be forgotten.*

THE CUTTING EDGE

BEHIND THE SCENES

Capt Timothy D. Miller
4315 CCTS, Vandenberg AFB

At the CCTS we specialize in teaching ICBM missile operations procedures to future combat crew members. Currently, we teach only Minuteman students, but with the development of the Peacekeeper weapon system we're planning to add Initial Qualification Training (IQT) for that system in 1987. Some recent changes to IQT affect an area most students never see — the management. Other changes do affect the training of our students and ultimately the missile crew force.

Approximately two years ago, a major realignment of the 4315th's organizational structure occurred. The commander renamed the Curriculum Management Branch as the Courseware Development Section, and put it under the chief of training. This put the training development people and training delivery people on the same level in the squadron, allowing the everyday training decisions to be worked out at the lowest possible level, (0-3 and 0-4), rather than at the branch level (0-5). A classic implementation of the "Buck Stop" concept.

The second change occurred within the courseware development area itself. Three instructors were moved from the training delivery sections and placed under the program manager for a particular weapon system. Thus, a flight of four courseware developers manages each version of Minuteman training. The Peacekeeper weapon system has been added to the section; and in October 1983 we added a Minuteman codes flight, currently manned by two officers. The six flights are directed and coordinated in their everyday routine by a senior courseware developer and a section chief. All are captains with the exception of the section chief, a major.

The single most important change to occur in the reorganization is the emergence of courseware developers. Their job in the 4315th is to develop all the materials used by instructors and students for instruction of ICBM operations. Since they can devote all their time to courseware development, we get quality training materials. Each flight currently has produced 23 to 25 launch control center simulator scripts, 25 to 30 academic classroom lesson plans and two or three study guides, which contain about 500 pages of text per guide. They also produce videotape scripts and work with the 1369th Audiovisual Squadron (MAC) in filming videotapes.

One of the benefits of putting the development of all course materials under one section is the increased exchange of ideas between weapon systems. In the past, for example, instructors from the Minuteman II system at Grand Forks and Malmstrom and the Minuteman Modernized Command Data Buffer systems at Minot and F. E. Warren worked independently of each other with little exchange of ideas. The same was true for the instructors from Whiteman, Malmstrom and Ellsworth Air Force Bases. The result was the instructors were "reinventing the wheel," and common tasks were trained differently. For example, F. E. Warren instructors and Whiteman instructors were teaching identical Emergency Power and Air Procedures yet F. E. Warren took three days to do it, while Whiteman took two. They weren't using a common lesson plan: each was developed and maintained separately. The Air Force Satellite Communications and Survivable Low Frequency Radio equipment is identical in all four Minuteman systems at all six wings, yet the operations procedures were all developed independently. This redundancy points to wasted effort within the Minuteman operations community, particularly in development of training materials and technical data. With the reorganization of the 4315th this training redundancy will be eliminated.

In an effort to standardize what we teach, the courseware development section is in the midst of a major overhaul of all the training programs. The first phase is now complete with the completion of course sequencing. This was no small effort; each courseware flight worked with the weapon system training delivery section to analyze the best sequence to teach a basic Minuteman course. This resolved differences such as the ones cited above. Additionally, we discovered for every person involved in the process there is a different opinion of how to do the same job. But with a consolidated courseware development section, an agreement was reached.

The second phase of the overhaul is now underway. We're using a microcomputer to develop a data base of all Job Performance Requirements (JPRs) for all four Minuteman Systems. We will use the computer to identify all JPRs common to at least two weapon systems and then conduct an indepth analysis of all JPRs. The common JPRs will be split among the flights and assigned to one courseware developer who will determine what is necessary in order to teach the JPR to the level required for graduation. He will then analyze the best media to present the material, redefine his objectives and coordinate it with his counterparts in other weapon system flights. Finally, he'll develop a common lesson plan to be used by any one of the four weapon systems. Each JPR will be further analyzed after student performance to discover if any deficiencies exist in the training program. Problem areas will then be resolved.

As mentioned earlier, this major undertaking hasn't been without its problems. We've still got to maintain the existing material and update it when it changes. We've placed a majority of our course material on word processors which speeds changes and improves quality. However, about one-third of our material is still manually updated.This constraint will be eliminated in the near future. We've also encountered other obstacles. For example, we found that different weapon systems with standard equipment had nonstandard checklists. The 4315 CCTS identified this problem to the Directorate of Missile Management at HQ SAC; they've taken action to correct it.

Those are the changes we've made in our management. Since most of you were on the receiving end of our product you probably and no idea how we do business in 4315th. In essence we've reorganized our squadron to address some of the training problems which have plagued the missile business for years. We're in a unique position since we're the only unit in the command which makes use of all Minuteman operations technical orders on an everyday basis. We're also concerned with training the novice student which makes us more dependent on standard technical data. By comparing TOs against each other, we've found that not all wings benefit from the exchange of information and improvements through the AFTO 22 process.

The 4315th is also unique in that it has an open forum for the exchange of ideas from instructors who come from all six Minuteman wings. The dividends are now just beginning to be felt. We're getting good ideas into all of our lesson plans, not just one or two systems. I'm sure the future will hold some interesting changes in the missile operations career field and I'd like to appeal to each of you to consider becoming an instructor. If you're good at it and truly believe that training makes the difference, give us a call.

PROFESSIONAL PERFORMERS

Aircraft Maintenance

SSgt Michael J. Lynch, 508 BMW, Pease AFB, is SAC's Maintenance Airman of the Month. Assigned to the propulsion branch where he is the assistant NCOIC of the jet engine test cell, Sgt Lynch is often called upon to work far past normal duty hours. His common sense approach to troubleshooting, repairing and testing engines always produces excellent results, usually returning the aircraft to "fully mission capable" status in the same day. As a member of the 1983 Red Flag maintenance team, Sgt Lynch's unique ability to troubleshoot and repair TF30 engines played a key role in the wing meeting its tough flying schedule. On another occasion he was sent to Robins AFB to troubleshoot an engine that had failed in flight. He quickly diagnosed the problem to be a failed engine power shaft. He then removed and replaced the engine allowing the aircraft to return to home station in minimum time. During the last SAC MSET visit, he was recognized as an "Outstanding Performer" for a flawless FB-111A engine run evaluation. Sgt Lynch was recently selected as the "Propulsion Specialist" in support of the Hydraulic Fluid and Shale Oil Based JP-4 Evaluation in the Climatic Laboratory at Eglin AFB.

Missile Maintenance

SrA John J. Visconti, 91 SMW, Team Training Branch (TTB), Minot AFB, is SAC ICBM Maintenance Airman of the Month.

SrA Visconti's professionalism and excellence have been recognized by wing and higher headquarters evaluators. He received an excellent technical instructor proficiency evaluation from the unit's QC evaluators. He personally developed checklists used to inspect new TTB trainer hardware. The TTB trainers were later recognized as the ". . . best seen this cycle . . ." by the SAC IG.

SrA Visconti has excelled as an ICBM weapon system instructor. He recently reviewed and updated 74 Electro-Mechanical Team Section lesson plans. The SAC IG recognized these plans as a superior management product. He developed two comprehensive 100-question tests, which are administered to all EMT students. These tests highlight student strengths and weaknesses and clearly identify required remedial training. His superior instructional skills are also evidenced by his students' initial evaluation pass rate this year — 100%.

Flying Crew

Crew R-121R, 305 AREFW, Grissom AFB, consisting of 1Lt Tony G. Cox, P; 1Lt Matthew K. Jones, CP; Capt Stephen J. Apple, IN; SrA Scott A. Konieczka, BO; Capt Harold L. Davis, IN/EN; and SSgt Gregory E. Genenbacher, IBO, is SAC's Flying Crew of the Month.

Recently, Lt Cox and crew took off on what began as a normal training sortie. The flight was a scheduled in-flight evaluation for the navigator. The mission, which included receiver air refueling with a KC-10, tanker air refueling with the same KC-10, and a celestial navigation leg, went as planned for the first five hours. As Sgt Genenbacher set the sextant for the final celestial shots, he noticed the outer pane of the left sextant window was cracked. Lt Jones referred to the Dash One, and found normal pressurization should be maintained. However, further investigation of the window revealed cracking of the inner pane as well. The navigation leg was immediately terminated, and the crew instructed to strap in and don their oxygen masks. An emergency descent was requested and initiated to FL 250. The crew then accomplished the airplane depressurization checklist to relieve the pressure differential on the sextant window. All crewmembers were monitored for symptoms of hypoxia or sinus and ear problems. Once depressurization was completed and the entire crew reported no physical difficulties, Lt Cox began further descent to 9000 feet to allow the crew to remove their oxygen masks and continue the flight as normally as possible. Traffic pattern work had been scheduled, but the decision was made to land as soon as possible to minimize the chances of an engine ingesting pieces of the window. An uneventful ILS approach and landing were accomplished. Exceptional crew coordination as cited by Capt Davis, the evaluator, coupled with outstanding flying skills prevented injury to the crew and resulted in the safe recovery of one of only seven KC-135A Refuelable Tankers in the inventory.

Safety Man

Mr. Roy N. Doucette, 42 FMS Unit Safety Representative, Loring AFB, is SAC's Safety Man of the Month. Mr. Doucette's safety responsibilities encompass over 300 personnel, 35 general/special purpose vehicles, and 16 high hazard shops which are involved in aircraft/flight line maintenance and support activities which are widely spread. Although unit operations are vast and varied, through a constant review of directives, constant monitoring, and direct action when problems are noted, Mr. Doucette has continued to maintain a low mishap rate for his unit.

Mr. Doucette's attention to detail and his outstanding desire and motivation to excel in his performance of safety duties is a definite factor in the acceleration from unsatisfactory ratings to two consecutive excellent ratings for his unit.

VECTORS TO A B-52 FULL STOP

cont'd from page 11

and runway surface. During a portion of every skid cycle, a wheel is producing considerably less braking effort than when it is rolling but being braked to the point just before starting to skid.

During cycling when brake pressure is being relieved and later reapplied, tires produce little braking. Therefore excessive cycling of the antiskid system reduces total braking effort roughly in proportion to the cycling rate.

The recommended braking procedure is as follows:

1. Gradually increase pedal pressure until antiskid cycling occurs.Cycling can be detected by a kick in the brake pedals.

2. Release brake pressure until cycling disappears.

3. Repeat steps 1 and 2.

4. If directional control becomes difficult, release brake pressure, level the wings to equalize wheel loads, and then reapply brakes. Under some runway conditions the aircraft wheels could become locked. When both wheels of a truck stop turning because of low tire-runway friction plus applied brakes, the antiskid system interprets the non turning wheels as an indication that the aircraft has parked. Then with the brakes applied and both wheels in a skid, as the aircraft runs out of the slick condition, encountering a normal runway surface, the wheels may not accelerate to reactivate the antiskid system. In this situation, tire blowout could occur. Thus if runway conditions conducive to prolonged skids are encountered, a momentary release of the brakes to allow wheel spin-up is advisable."

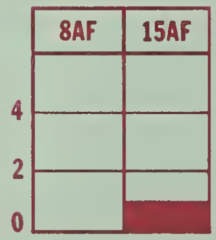
Author's note: If the runway is dry and you are on the brakes but the airplane won't turn, you have left the antiskid switch off and are in the process of frying all your tires. Don't ask how I know this!

SAC'S FLYING SAFETY RECORD

CLASS A FLIGHT MISHAPS

YEAR	74	75	76	77	78	79	80	81	82	83	84
TOTAL MISHAPS	8	4	4	4	1	5	4	4	2	2	1
FLYING HOURS 100,000	5.1	4.2	3.9	3.7	3.6	3.6	3.4	3.5	3.5	3.0	2.5
FATALITIES	14	7	22	10	5	7	2	14	9	7	0
RATE	1.6	1.0	1.0	1.1	.28	1.4	1.2	1.2	.58	.65	.32*

* ESTIMATED RATE BASED ON 310,000 FLYING HOURS



1984 CLASS A MISHAPS	
TR-1	JULY

CLASS B	
SEP	1
1984	3

CLASS C	
SEP	15
1984	189

FLYING HOURS	
SEP	27,947
1984	254,598

cont'd from page 15

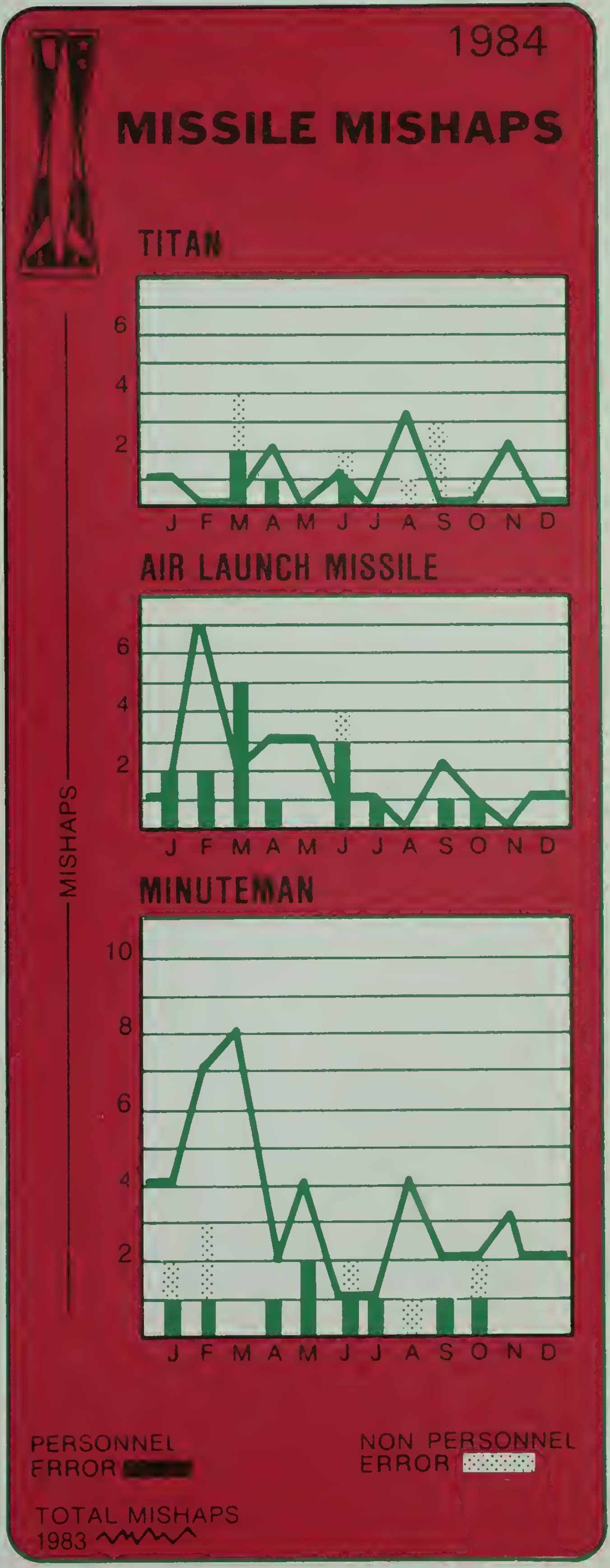
do a good job. If he is not making progress, take a look in the mirror and you will get a chance to see the reason he is not doing better. You probably have failed. We have seen grade sheets start from "excellent" in the first flight to "unsatisfactory" in four or five. Nice work. In only a short period of time you brought him all the way to "unqualified". We will spot you one thing, he really would like to do a good job, if for no other reason than to get you off his back. He is trying his best, are you? Make sure you do!

Prior planning helps you and your student to achieve the best results. Let him know what the plan is and stick by it. If he knows what you are planning to do and what you expect of him, he will do it better. He really has a right to know since he is the reason you are flying in the first place, and besides, he is the one who gets evaluated. Give him a chance. Brief him and critique him. He deserves it. Honesty is also important. Don't con him. He knows when he did well and when he did poorly. Don't lie to him. It is no sin to make a mistake or simply not know. But much more important than telling him what he did wrong is telling him how to do it right and why he did it wrong. We have heard such statements as "That was a bad landing." The student knew it was going to be a bad landing long before you did. What he wants to say is, "No kidding IP, really? How observant of you." He knows the results; tell him why he made the errors and how he can prevent recurrence. He has a right to know. He is the one trying to do it. A good instructor cannot only tell him why he did something wrong but prevent him from doing it in the first place. Brief him on what he is going to do and how he should do it to achieve good results. If he still has problems, try a different approach.

Along with your responsibilities to the unit, there are responsibilities of your unit to you and to your students. Your unit must remember that you are trying to help them and safety is an integral part of your plan. In order to effectively accomplish your duties, you must have its support. You must make your needs known and they must do their best to support them. The biggest key to the success of your program is adequate and timely scheduling. This will allow you the best utilization of available time and aircraft. One last thought; you must stay current. You are the one that must demonstrate and you are the one who may have to recover.

Your ability to turn out a safe finished product is the key to safety. You can and should provide the future direction of this command as far as flying goes. SAC needs your experience, knowledge, and skills. Make your ideas known. Work closely with CEVG and Stan/Eval. Improve yourself so that you can be the best instructor you are capable of being. Be knowledgeable, know the regulations and manuals, and for heavens sake, know the DASH-1. Be a sales person, sell yourself, your plane, our command. The challenge is there, please accept it. **SAC IS DEPENDING ON YOU!!!**

"FLY THE AIRCRAFT"



INS DIRECT = RNAV

SIFC

A KC-135, Frost 62, redeploying from the European Tanker Task Force to the West Coast is now halfway across the United States after an enroute stop at Pease AFB. The mission from Pease to home base was planned as a celestial navigation leg followed by flying a jet route, J-94, from O'Neill to Reno. The navigator has just completed his nav leg and is now ready to transfer navigation to the pilots. He tells the pilots that the current aircraft heading is good for O'Neill and that he is checking off interphone and out of position to stretch his legs and eat his now ready frozen meal.

The pilots who thought flying the jet route was a good idea during mission planning now have second thoughts about changing navaids and intercepting and maintaining all those courses and radials. They are already 16 hours into their crew duty day and having the nav give them headings for the next three hours would be much easier.

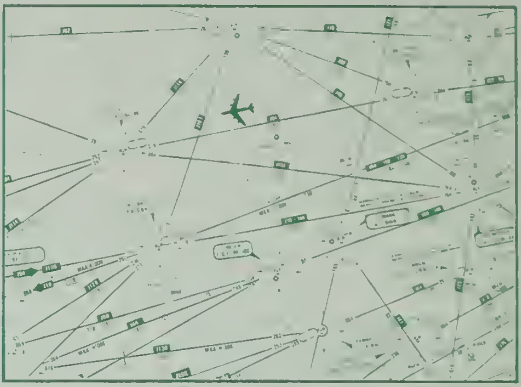
The pilot's eyes light up when he hears Kansas City Center clear American 132 "INS direct Seattle." "Co," says the pilot, "we've got an INS. See if Kansas City can give us INS direct home base." The copilot hesitates, remembering a discussion of "RNAV" requirements and procedures during his last academic Instrument Refresher Course and questions the pilot. "Boss, are you sure it's legal to fly INS direct?" The pilot reasures him that he has done this before and there were no problems. The now convinced copilot requests and receives the clearance "INS direct home base" from Kansas City Center. The pilot turns to tell the nav of their new clearance but sees he is still back by the galley enjoying his meal. He inserts the coordinates of home base from the IFR Sup into the INS, inserts present position direct home base into the INS, ties the INS to the autopilot and sits back and relaxes letting the wonderful black box take care of the navigation.

Was the copilot right? Will this crew encounter any problems during the next three hours? The following material should answer these questions.

RNAV or airborne area navigation is a method of navigation that permits aircraft operations on any desired course and was developed to overcome many of the disadvantages of the Airway/Jet Route Structure.

Navigation equipment that meets the performance specifications in FAA Advisory Circular 90-45A is considered **suitable** for RNAV operation. There are two basic types of RNAV equipment, one which utilizes the signals from VOR/DME or TACAN ground stations and the other which is self-contained such as LORAN, OMEGA or INS.

In order to use this equipment as the primary/**sole** means of navigation in the National Airspace System (NAS), FAA AC 90-45A requires that it must also be certified by the FAA. In the case of the military, AFR 60-27 states that the MAJCOM may approve the use of military equipment for RNAV use as long as it meets the accuracy tolerances listed in AC 90-45A.



The INS installed in the KC-135 is a suitable RNAV system but it has not been approved by HQ SAC for RNAV use. (The KC-10 with its triple INS has been certified for RNAV but only in the enroute structure, not for terminal or approach operations.)

An ARTCC controller will clear an aircraft INS direct if requested and if traffic permits but the controller is assuming that the aircraft is IFR RNAV certified and capable of maintaining course within the limits listed in FAA AC 90-45A.

A KC-135 can file and fly a "straight line" or fix to fix flight plan but this procedure has nothing to do with RNAV or RNAV equipment. Air Traffic Control Manual 7110.65 authorizes the military to define portions of their routing in accordance with degree-distance route definition when airborne radar of celestial navigation is used. (The KC-135's primary means of position fixing is airborne radar.)

A message from HQ SAC/DOT dated 15 Dec 1983 stated that aircraft equipped with coordinate (Lat/Long) navigation capability will be authorized to file and fly random RNAV routes between approved departure and arrival fixes, provided the enroute altitude is FL 390 or above. This message was a synopsis of FAA AC 90-82 and left out the statement in AC 90-82 that "only aircraft certified for IFR RNAV operations can use these new procedures."

The crew previously mentioned in this article will probably not have any problems on their trip home unless the INS drives off course or the coordinates inserted into the INS for home base were incorrect. The INS is an excellent navigation aid but it should not be used as the **sole** means of navigation until HQ SAC approves it for IFR RNAV use.

HQ SAC is currently working the RNAV problem for the KC-135. We will include any new information on RNAV approval in our quarterly news letter. If you have any questions don't hesitate to give us a call at Autovon 347-4571.

SAC SAFETY SCREEN

The SAC Safety Screen is an honor roll of SAC's most professional crews To gain listing on the Screen, crew members must be nominated by their unit commanders and meet high selection criteria of experience in their aircraft or missile system *IAW AFR 127-2/SS1.*

320 BMW, Mather Crew S-02: IP Capt John R Delphenich, CP 1Lt Tom Gilbert, RN Capt Charles L Viers, NN 1Lt Claude R Hollingsworth, EW Capt Kyle J Marx, AG SSgt John P Wooldridge

320 BMW, Mather Crew E-115: IP Capt Duane P Shrefler, CP 2Lt Steve N Lewis, NN 2Lt Timothy L Gaynor, BO Sgt Brian E Towle

917 AREFS, Dyess Crew R-115: P Capt James J Greenough, CP 1Lt Michael A Ferrell, N 1Lt Mark A Lynn, BO SSgt James J Norris

931 AREFG, Grissom: AC Maj Michael L Tyler, CP Maj Harley A Wood, N Maj Phillip F Trick, BO TSgt Randall L Rinehart

128 ARG, Gen Mitchell Fld, Milwaukee, WI: IP Maj John E Wozny, CP 2Lt Loren L Meddaugh, N Maj James P Longtine, BO MSgt Charles W Schweiss

93 AREFS, Castle Crew IT-77: IP Maj Louis Descoteaux, IN Capt Al Lovejoy, IBO SSgt Darnell Butler

924 AREFS, Castle Crew E-107: IP Capt Matt Williams, CP 1Lt Lynn Coehoorn, NN Capt Scott McMullen, BO Sgt Randy Johnson

6 SW, Eielson Crew E-05: IP Capt Lawrence F Stone, CP Capt James D Parsons, N-1 Capt David A Patterson, N-2 1Lt Calvin J Romrell

6 SW, Eielson Crew E-16: TC Capt James L Small, R1 Capt Robert C Macy, R2 1Lt Greg A Garrison, R4 1Lt William L Tomson, MT Capt Lyndon G Willms, PT SSgt William P Pickle, ET SMSgt Joseph W Forgue

328 BMS, Castle Crew IT-25: IP Capt Ronald Alderman, IRN Capt Richard Evans, IEW Capt Kurt Heinz, IG TSgt Aaron Erickson

CFIC, Castle Crew IT-50: IP Maj Jack Richard, IRN Capt Greg Melton, IEW Capt John Remisovsky, IAG MSgt Mike Rook

337 BMS, Dyess Crew E-11: IP Capt David J Wilson, CP 1Lt Jeffrey C Lenhart, RN 1Lt Scott K Franks, N 1Lt Michael T Saxton, EW 1Lt Douglas W Shaw, G Sgt Michael L Simmons

380 AREFS, Plattsburgh Crew E-111: IP Maj Walter G Russell, CP Capt Karen E Love, IN 1Lt Scott J Ogden, IBO SSgt James A Bullock, Jr

141 AREFW, Fairchild (WAANG): P Maj Jay G Gallentine, CP Maj Brian W Scott, N Maj Donald E Rogers, BO TSgt Daniel I Moriarty

91 AREFS, McConnell Crew E-113: P Capt Linda H Brown, CP Capt George A Waddell, N 1Lt Niels T Andersen, IBO SSgt Rand M Sanders

384 AREFS, McConnell Crew E-159: IP Maj George A Loerakker, CP 1Lt Kenneth W Randolph, N 1Lt Janet C Lewis, BO SrA Michael J Perry

70 AREFS, Grissom Crew R-182-RP: P Capt Dale B Johnson, CP 1Lt Christopher E Coley, IN 1Lt Frank Albanese Jr, IN Sgt Nicholas T Price

305 AREFS, Grissom Crew E-132-R: IP Capt James Grizzard, CP 1Lt Daniel Cabral, IN Capt Hugh Coffman, IBO SSgt Paul Houser, IP Maj Eddie Roush

305 AREFS, Grissom Crew E-120: IP Maj Raymond Hicks, CP Capt Barry Obie, N 2Lt Bonifalio Hernandez, IBO SSgt Larry Page

70 AREFS, Grissom Crew E-163-RP: IP Maj Daniel Goddard, CP 1Lt Scott Kishline, IN 1Lt Michael Franczck, N 1Lt Jeffrey Harper, BO Sgt Michael Paver

905 AREFS, Grand Forks Crew E-112: IP Capt Kip K Stangl, CP 1Lt Michael L Marsden, N 1Lt Robert R June, BO A1C Daniel V Elam

43 AREFS, Fairchild Crew #-132: P Capt Clyde M Eggett, CP 2Lt Kevin W Graves, N 1Lt Edward F Moses, BO A1C Samuel K Elliot

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Happy Holidays
From The Staff